

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Food Safety

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
502	New and Improved Food Products	0%	10%	17%	10%
702	Requirements and Function of Nutrients and Other Food Components	0%	10%	0%	10%
703	Nutrition Education and Behavior	0%	20%	0%	20%
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	90%	10%	29%	10%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	10%	20%	43%	20%
723	Hazards to Human Health and Safety	0%	0%	11%	0%
724	Healthy Lifestyle	0%	30%	0%	30%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2015	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	5.0	3.0	6.0
Actual Paid	0.9	3.2	6.3	5.8
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
45711	202421	239688	271923
1862 Matching	1890 Matching	1862 Matching	1890 Matching
45711	221019	239688	387841
1862 All Other	1890 All Other	1862 All Other	1890 All Other
162355	0	1185443	4560

V(D). Planned Program (Activity)

1. Brief description of the Activity

Food safety-related issues were addressed through extension and research activities including result demonstrations, workshops, classes, certification programs, studies and effective use of a variety of media sources to address food safety-related issues. Programs reached producers, consumers, handlers and processors about strategies for keeping food safe. Specific certification trainings that were conducted included Sanitation Control Protocol (SCP), Seafood HACCP; Meat and Poultry HACCP; Vacuum Packaging HACCP, Better Process Control School (BPCS) and ServSafe.

Specifically, research and extension activities that were conducted during this reporting cycle include the following:

- Collaborated and conducted research on food safety prevalent foodborne diseases;
- Promoted use of food safety, safe school food nutrition curriculums; and health tips to ensure food safety during school activities;
 - Created awareness and generated knowledge in Louisiana residents about safe food handling practices through workshops, classes, demonstrations, home/office visits, publications, fact sheets, newsletters, and research reports and by using Web and other social media tools;
 - Collaborated, cooperated and partnered with local, state and federal agencies, institutions, groups, private organizations/associations in seeking and delivering food safety information to residents;
 - An extension food safety specialist was hired. Her role includes building capacity to respond to clientele needs regarding food safety;
 - Certification trainings that were conducted included Sanitation Control Protocol (SCP), Seafood HACCP; Meat and Poultry HACCP; Vacuum Packaging HACCP, Better Process Control School (BPCS) and ServSafe.
 - Research and dissemination of research-based information on Pre and Post Harvesting (Animal and Plant) best practice techniques as recognized by FSMA was undertaken.

2. Brief description of the target audience

Growers, consumers, commercial seafood processors, children and food handlers including restaurateurs and food vendors were target audience of this planned program. There is a large number of low income and limited resource families in Louisiana. These families typically lack the knowledge, information, and skills to utilize existing resources to improve their diet and ensure food safety. Children,

the elderly and individuals with various health limitations are particularly vulnerable to food borne illnesses. Particular attention was focused on growers and food producers and processors as the primary means of reducing the prevalence of food borne illnesses originating during the production, packing and processing phases.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2015	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	29170	352801	833	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2015

Actual: 1

Patents listed

Delivery of Bioactive, Nanoencapsulated Antioxidants

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2015	Extension	Research	Total
Actual	1	7	8

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of individuals certified through food safety programs

Year	Actual
2015	305

Output #2

Output Measure

- Number of educational program activities

Year	Actual
2015	717

Output #3

Output Measure

- Number of educational contacts
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Number of published materials distributed
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Number of research & extension outreach publications developed (in-house)

Year	Actual
2015	2

Output #6

Output Measure

- Number of Web page views

Year	Actual
2015	69476

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increase adoption of recommended safe food handling practices at the individual, family, community, production, and supply system levels.
2	Increase number of viable technologies to improve food safety

Outcome #1

1. Outcome Measures

Increase adoption of recommended safe food handling practices at the individual, family, community, production, and supply system levels.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Food-related diseases affect tens of millions of people and kill thousands. Increasingly, fresh fruit and vegetable products have been implicated as the source for foodborne pathogens causing foodborne illnesses. Outbreaks due to Salmonella and E-Coli contamination were reported during the year. This has led to the development of recommendations for some commodity producers, that precautions be taken in the fields and during post-harvest processing and handling to prevent pathogen contamination. Some Louisiana environmental conditions provide great opportunities for food borne illnesses particularly the hot humid climate. As a way of life, Louisiana citizens participate in many outdoor events where foods are pre-cooked, kept for a longer period of time and served outside. Research indicates that handling food correctly can prevent 90 to 95% of food borne illnesses.

What has been done

Research scientists and extension personnel in the Nutrition and Health Program at the LSU and SU Ag Centers collaborated and worked with citizens of Louisiana to increase their understanding of the impacts of foodborne illnesses and the techniques of handling food safely. One goal was to provide specialized training to professional users and the other goal was to help citizens especially the elderly, low income, educationally disadvantaged and poor families enhance their skills in proper food selection, storage and preparation. We conducted the following trainings:

HACCP: Four trainings with 35 participants

ServeSafe: Six trainings with 109 participants

Good Agricultural Practices (GAP) trainings: Two trainings for 65 people

Important topics were covered, for example food safety regulations, seafood safety hazards, hazard analysis, critical control point (CCP) determination, food safety modernization Act (FSMA), etc. Participants were tested and certificates awarded after successful completion.

Results

One hundred percent of the 209 participants learned how to handle food safely to avoid contamination and how to ensure that food safety guidelines are adhered to while doing so. The successful rate for receiving certificate was been 90-95%. The outreach program evaluation on understanding the impacts of foodborne illnesses showed that 95% of the participants learned and have implemented improved food handling procedures I their organizations (including, university cafeteria, chocolate factory, restaurants (fast food and traditional), bakeries, hotels, hospitals, churches, and grocery stores, etc.). An assessment of knowledge was conducted in a randomly selected Better Process Control workshop. Pre and post measurements of knowledge were taken with 22 participants. Knowledge increased by 21.8% from pretest (M = 69.5) to posttest (M = 91.4), a statistically significant increase (t = 5.078; df = 21; p < .001).

4. Associated Knowledge Areas

KA Code	Knowledge Area
502	New and Improved Food Products
703	Nutrition Education and Behavior
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
723	Hazards to Human Health and Safety
724	Healthy Lifestyle

Outcome #2

1. Outcome Measures

Increase number of viable technologies to improve food safety

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2015	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
502	New and Improved Food Products
702	Requirements and Function of Nutrients and Other Food Components
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

See Results Section of Qualitative Impact Statement

Key Items of Evaluation